AMENDMENTS TO THE CLAIMS

For the convenience of the Examiner, all claims have been presented whether or not an amendment has been made. The claims have been amended as follows:

1. **(Currently Amended)** A method of communicating with an element within an enterprise network, comprising:

at a first client, encapsulating a first point-to point protocol signal within a network address request header **comprising a Dynamic Host Configuration Protocol DISCOVER header or a Bootstrap Protocol REQUEST header, the first point-to-point protocol signal comprising a header that includes an identifier of a second client**; and

communicating the ~~**network address request**~~ encapsulated signal toward a tunneling server.

2. **(Canceled)**

3. **(Currently Amended)** The method of Claim 1, wherein communicating the ~~**network address request**~~ encapsulated signal toward a tunneling server comprises communicating the signal toward a router configured to relay network address requests to the tunneling server without referencing a routing table indexed by data channel addresses.

4. **(Currently Amended)** The method of Claim 3, wherein the ~~**first point-to-point protocol signal**~~ **identifier** comprises a control channel address of ~~**a second**~~ **the second** client, the control channel address being different from any data channel address recognized by the router.

5. **(Currently Amended)** The method of Claim 1, wherein the first point-to-point protocol signal **further** comprises a payload including information to be applied to an application residing at ~~**a second**~~ **the second** client.

6. **(Original)** The method of Claim 5, wherein the application residing at the second client comprises a maintenance application operable to diagnose operational characteristics of the second client.

7. **(Currently Amended)** The method of Claim 1, wherein the first point-to-point protocol signal **further** comprises a payload including at least a portion of an application to be installed on ~~a second~~ **the second** client.

8. **(Original)** The method of Claim 1, further comprising encapsulating the first point-to-point protocol signal within a tunneling header prior to encapsulating the first point-to-point protocol signal within the network address request header, the tunneling header operable to facilitate a tunneling session between the first client and the tunneling server.

9. **(Original)** The method of Claim 8, wherein the tunneling header comprises a tunneling header selected from the group consisting of a Layer Two Tunneling Protocol (L2TP) header, a Point-to-Point Tunneling Protocol (PPTP), or a Layer Two Forwarding (L2F) header.

10. **(Currently Amended)** The method of Claim 1, further comprising receiving ~~a network address response encapsulated~~ **an encapsulated response** signal from the tunneling server, the ~~network address response~~ encapsulated **response** signal comprising a second point-to-point protocol signal responsive to the first point-to-point protocol signal and encapsulated within a network address response header.

11. **(Currently Amended)** The method of ~~Claim 1~~ **Claim 10**, wherein the network address response header comprises a Dynamic Host Configuration Protocol OFFER header or a Bootstrap Protocol RESPONSE header.

12. **(Currently Amended)** A computer readable medium operable to execute the following steps on a processor of a computer:

at a first client, encapsulating a first point-to point protocol signal within a network address request header **comprising a Dynamic Host Configuration Protocol DISCOVER header or a Bootstrap Protocol REQUEST header, the first point-to-point protocol signal comprising a header that includes an identifier of a second client**; and

communicating the ~~network address request~~ encapsulated signal toward a tunneling server.

13. **(Currently Amended)** The computer readable medium of Claim 12, wherein communicating the ~~network address request~~ encapsulated signal toward a tunneling server comprises communicating the signal toward a router configured to relay network address requests to the tunneling server without referencing a routing table indexed by data channel addresses.

14. **(Currently Amended)** The computer readable medium of Claim 13, wherein the ~~first point-to-point protocol signal~~ **identifier** comprises a control channel address of ~~a second~~ **the second** client, the control channel address being different from any data channel address recognized by the router.

15. **(Currently Amended)** The computer readable medium of Claim 12, wherein the first point-to-point protocol signal **further** comprises a payload including information to be applied to an application residing at ~~a second~~ **the second** client.

16. **(Currently Amended)** The computer readable medium of Claim 12, wherein the first point-to-point protocol signal **further** comprises a payload including at least a portion of an application to be installed on ~~a second~~ **the second** client.

17. **(Original)** The computer readable medium of Claim 12, further comprising encapsulating the first point-to-point protocol signal within a tunneling header prior to encapsulating the first point-to-point protocol signal within the network address request header, the tunneling header operable to facilitate a tunneling session between the first client and the tunneling server.

18. **(Currently Amended)** The computer readable medium of Claim 12, further comprising receiving ~~**a network address response encapsulated**~~ **an encapsulated response** signal from the tunneling server, the ~~**network address response**~~ encapsulated **response** signal comprising a second point-to-point protocol signal responsive to the first point-to-point protocol signal and encapsulated within a network address response header.

19. **(Currently Amended)** A method of tunneling in an enterprise network comprising a plurality of clients coupled to a tunneling server by at least one router, the method comprising:

at a first client, generating point-to-point protocol signal;

encapsulating the point-to-point protocol signal within a network address request header;

communicating the ~~network address request~~ encapsulated ~~tunneling~~ signal toward a tunneling server operable to identify and remove the network address request header, to encapsulate the point-to-point protocol signal within a network address response header, and to communicate the ~~network address response~~ encapsulated **response** signal toward a second client.

20. **(Currently Amended)** The method of Claim 19, communicating the ~~network address request~~ encapsulated ~~tunneling~~ signal toward a tunneling server comprises communicating the signal toward a router operable to relay the signal toward the tunneling server without referencing a routing table indexed by data channel addresses.

21. **(Original)** The method of Claim 20, wherein the point-to-point protocol signal comprises a control channel address of a second client, the control channel address being different from any data channel address recognized by any router coupled to the tunneling server.

22. **(Original)** The method of Claim 19, further comprising encapsulating the point-to-point protocol signal within a tunneling header prior to encapsulating the point-to-point protocol signal within the network address request header, the tunneling header operable to facilitate a tunneling session between the first client and the tunneling server.

23. **(Original)** The method of Claim 19, further comprising receiving a response from the second client, the response forwarded from the tunneling server and comprising a point-to-point protocol signal encapsulated within a network address response header.

24. **(Currently Amended)** In an enterprise network comprising at least one client coupled to a tunneling server by a router having a routing table indexed by data channel addresses, a first client comprising:

a protocol stack operable to generate a first point-to-point protocol signal **comprising a header that includes an identifier of a second client**; and

a tunneling module operable to encapsulate the first point-to-point encapsulated signal within a network address request header **comprising a Dynamic Host Configuration Protocol DISCOVER header or a Bootstrap Protocol REQUEST header**;

wherein the first client is operable to communicate the ~~network address request~~ encapsulated signal toward the router for forwarding to the tunneling server without reference to the routing table.

25. **(Canceled)**

26. **(Currently Amended)** The first client of Claim 24, wherein the ~~network address request~~ encapsulated signal comprises a tunneling header encapsulating the first point-to-point signal, the tunneling header operable to facilitate a tunneling session between the first client and the tunneling server.

27. **(Original)** The first client of Claim 26, wherein the tunneling header comprises a tunneling header selected from the group consisting of a Layer Two Tunneling Protocol (L2TP) header, a Point-to-Point Tunneling Protocol (PPTP), or a Layer Two Forwarding (L2F) header.

28. **(Currently Amended)** The first client of Claim 24, wherein **the second client is coupled to the tunneling server and** the first point-to-point protocol signal **further comprises** ~~comprises: an identification of a second client coupled to the tunneling server; and~~ information to be applied to an application residing at the second client.

29. **(Currently Amended)** The first client of Claim 28, wherein the ~~**identification**~~ **identifier** of the second client comprises a control channel address of the second client, the control channel address being distinct from any data channel address used to index a routing table accessible to the router.

30. **(Original)** The first client of Claim 28, wherein information comprises information to be applied to a maintenance application residing at the second client and operable to diagnose operational characteristics of the second client.

31. **(Currently Amended)** The first client of Claim 24, wherein the tunneling module is operable to receive a point-to-point protocol signal encapsulated within a network address response header, the ~~**network address response encapsulated**~~ **encapsulated response** signal having been relayed from the tunneling server through the router without reference to a routing table indexed by data channels.

32. **(Original)** The first client of Claim 31, wherein the network address response header comprises a DHCP OFFER header or a Bootstrap Protocol RESPONSE header.

33. **(Currently Amended)** In an enterprise network, a client having an enterprise protocol stack operable to process signals received from a data channel and associated with a data channel address, the client comprising:

a tunneling module operable to receive a first point-to-point protocol signal encapsulated within a network address response header and to remove the network address response header to expose the first point-to-point protocol signal**, the first point-to-point protocol signal comprising a header that includes an identifier of a client, the network address response header comprising a Dynamic Host Configuration Protocol OFFER header or a Bootstrap Protocol RESPONSE header**; and

a private protocol stack operable to receive the first point-to-point protocol signal from the tunneling module and to communicate at least a portion of a payload of the first point-to-point protocol signal to a socket layer coupled to an application residing at the client.

34. **(Canceled)**

35. **(Currently Amended)** The client of Claim 33, wherein the application comprises a maintenance application operable to diagnose operational characteristics of the ~~second~~ client.

36. **(Original)** The client of Claim 33, wherein the application comprises an application operable to process the at least a portion of the payload and to generate an output to be communicated toward another network element.

37. **(Currently Amended)** The client of Claim 33, wherein:

the private protocol stack is operable to generate a second point-to-point protocol signal comprising **a header that includes an identifier of a destination network element and** a payload carrying at least a portion of the output; and

wherein the tunneling module is operable to encapsulate the second point-to-point signal within a network address request header and communicate the network address request encapsulated signal to a router for relaying toward ~~a destination~~ **the destination** network element without reference to a routing table indexed by data channel addresses.

38. **(Original)** The client of Claim 37, wherein the network address request header comprises a Dynamic Host Configuration Protocol DISCOVER header or a Bootstrap Protocol REQUEST header.

39. **(Original)** The client of Claim 33, wherein the first point-to-point protocol signal is encapsulated within a tunneling header and further encapsulated within the network address response header, and wherein the tunneling module is operable to process the tunneling header to maintain a tunneling session between the client and a tunneling server.

40. **(Original)** The client of Claim 39, wherein the tunneling header comprises a tunneling header selected from the group consisting of a Layer Two Tunneling Protocol (L2TP) header, a Point-to-Point Tunneling Protocol (PPTP), or a Layer Two Forwarding (L2F) header.

41. **(New)** The method of Claim 1, wherein the identifier comprises a host name, IP address, or MAC address of the second client, the host name, IP address, or MAC address being different from any host name, IP address, or MAC address recognized by the router.

42. **(New)** The computer readable medium of Claim 12, wherein the identifier comprises a host name, IP address, or MAC address of the second client, the host name, IP address, or MAC address being different from any host name, IP address, or MAC address recognized by the router.

43. **(New)** The first client of Claim 24, wherein the identifier comprises a host name, IP address, or MAC address of the second client, the host name, IP address, or MAC address being different from any host name, IP address, or MAC address recognized by the router.

44. **(New)** The client of Claim 33, wherein the identifier comprises a control channel address of the client, the control channel address being different from any data channel address recognized by the router.

45. **(New)** The client of Claim 33, wherein the identifier comprises a host name, IP address, or MAC address of the client, the host name, IP address, or MAC address being different from any host name, IP address, or MAC address recognized by the router.